**Title:** Measles outbreak investigation report, Fishtown, Rivergee County, February 2019

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**Introduction:** Measles is a highly contagious disease caused by the measles virus. Despite vaccination interventions in Liberia, measles continuous with high morbidity and mortality among children below five years. Recent data indicates an increased incidence of measles among children above 5 years in Liberia. The disease is characterized by fever, cough, red eyes, and rashes with an incubation period of 7-14days. On Feb 28, 2019, the Rivergee County health office received report of suspected measles cases from Fishtown, Potupo District. Against this, a team was dispatched; to confirm the existence of the outbreak, describe and determine the magnitude and provide control measures.

**Method:** We interviewed all suspected cases, reviewed patient records, home based and immunization records and conducted active case search in the community and updated the line list. Blood specimen were collected from suspected cases for laboratory confirmation. We analysis data by person, place and time for frequencies, proportions, and rates.

**Results:** A total of 8 suspected cases were identified and line listed. The median age was 15 (10 months -18)years and females accounted for 60%. Of the suspected cases, 3 (37.5%) were measles IgM positive of which 2 were vaccinated. The attack rate was 1.4 per 1000 population and persons above 5 years were the highest 75% (6/8). The index case was a 17 year-old male who was vaccinated, had travelled to Joquiken town from February 12-25, 2019 where he interacted with similar cases. Confirmed cases were given supportive treatment and we conducted health education among the community dealers.

**Conclusion:** We confirmed an outbreak of measles among vaccinated and non-vaccinated persons in Fishtown, Potupo District. Effective treatment and health education helped to break the transmission barrier and end the outbreak. We recommend the introduction of a second dose vaccine (booster), especially among children between 5 and 15years.

**Keywords:** Measles, Fishtown, vaccination, Liberia